

CRITICAL NOTES ON ERIOPHYLLUM LAG.—I

LINCOLN CONSTANCE

The status of *Eriophyllum caespitosum* Douglas.

The writer has recently had the privilege of examining specimens (loaned by the Royal Botanic Gardens at Kew) collected in the Pacific Northwest over a hundred years ago by David Douglas. The study of these has brought to light several misconceptions which have persisted in the literature of the genus, and have been a source of confusion to taxonomists.

The original description of *Eriophyllum caespitosum* Dougl. (1) attributes to this species a decumbent habit, a gamophyllous involucre, and a short, "4-toothed" pappus. These characters have led to the association of this name with the California coastal plant, *Bahia arachnoidea* of Fischer and Ave-Lallement (2) and *Bahia latifolia* of Bentham (3). In the North American Flora (4), Rydberg revived *Eriophyllum caespitosum*, and reduced to synonymy with it these two binomials and certain later names derived from them.

Examination of what is assumed to be part of Douglas' original collection, in addition to specimens grown in the garden of the Horticultural Society of London from seed transmitted by him, reveals certain discrepancies in the original description. It is difficult to ascertain from these the nature of the habit, but the stems would appear to be very nearly erect. The involucre bracts are either quite distinct, or, possibly, very slightly united at the base. The pappus, on those achenes examined, consists of about 8 unequal paleae, the alternate ones lanceolate and acute, about 0.7 mm. long, the others oblong and obtuse, erose, about 0.5 mm. long. This is a very different condition from the vestigial toothed crown, characteristic of the Californian plants. Finally, the glabrous achenes are not turbinate, but narrowly oblong, tapering gradually; nor are the leaves rhombic, with a broadly cuneate entire base, incisely lobed or decurrently pinnatifid at or above the middle, but merely ovate and deeply pinnatifid with oblong, obtuse divisions.

The re-described characters, together with those of foliage and achenes, reveal that these specimens are typical of the Northwest, and not of California. The first of the former population to be described were the specimens collected by Lewis, "on the high banks of the Kooskoosky" (Clearwater River, Idaho County, Idaho), June 6, 1806. These were the basis for Pursh's *Actinella lanata* (5), a specific name which has been passed from genus to genus, finally to become *Eriophyllum lanatum* Forbes (6). In making this combination, Forbes considered *Eriophyllum caespitosum* Dougl. a synonym of *Eriophyllum lanatum*, and was followed in this by Gray (7), but Gray (8) subsequently reversed the status of these two names. Although the type of *Actinella lanata* Pursh (known to the writer through a photograph taken by Dr. C. C. Epling) differs from Douglas' material in a few minor details, it is undoubtedly a representative of the same population.

Thus, *Eriophyllum caespitosum* Dougl. becomes a synonym of *Eriophyllum lanatum* (Pursh) Forbes. As to the plant of the California coast, the first name unmistakably attributed to it was *Bahia arachnoidea* F. & L., described from the products of seeds collected at Fort Ross. Greene (9) altered this to *Eriophyllum arachnoideum*, and Jepson (10) modified it to *Eriophyllum lanatum* var. *arachnoideum*, with which the opinion of the writer is in full accord.

- (1) Lindl. Bot. Reg. 14: 1167. 1823.
- (2) Index Petrop. 9: 63. 1842.
- (3) Bot. Voy. Sulph. 30. 1844.
- (4) N. Am. Fl. 34: 90. 1915.
- (5) Fl. Am. Sept. 560. 1814.
- (6) Hort. Woburn 183. 1833.
- (7) Bot. Cal. 1: 381. 1876.
- (8) Am. Acad. Proc. 19: 26. 1883.
- (9) Man. Bot. Reg. S. F. Bay 207. 1894.
- (10) Man. Fl. Pl. Cal. 1119. 1925.

University of California, Berkeley, December, 1933.

OPEN LETTERS

The Knob-cone Pine

While on a recent hike through the foothills west of Yosemite National Park I noted a possible extension of the range of the knob-cone pine. All information available to me here indicates that the north side of the Merced River is its southernmost limit in the Sierra Nevada. Hence an observation on the opposite side of the river, five miles south of previous records, seemed noteworthy. The knob-cone pine occurs there in Section 34, T3S, R19E, at an elevation of 3800 to 4000 feet, this being the highest point in Section 34. The occurrence consists of a dense stand of young trees 10 to 20 feet high, covering about three acres, and growing on an eastern exposure. There are also scattering trees extending over perhaps 40 acres of the adjacent southern exposure.—CLIFFORD PRESNALL, Yosemite, Nov. 10, 1932.

Juglans Hindsii

On page 120 of Jepson's "Flora of Western Middle California", 2d edition, the California black walnut, *Juglans californica*, var. *Hindsii* Jepson, is described as growing on Walnut Creek, on the lower Sacramento River, and also in the Napa Range.

My cousin, Mr. L. D. Anderson, who lived in Pacheco, Contra Costa County, for nearly 75 years, tells me that there are several very large California black walnut trees growing on the Harry Keller ranch, formerly the Clayton ranch, at the town of Clayton, Contra Costa County. One of these trees is larger than any of the trees growing along Walnut Creek and the nuts, he says, are twice as large as those on the latter trees. Mr. Anderson tells me that Mr. Ed. Smith, pioneer walnut grower in the Ignacio Valley, always gets the nuts of this large tree to grow the "foundation" trees upon which he grafts "English" walnuts.—EDWARD P. E. TROY, San Francisco, Dec. 28, 1931.